

10/091, 885

| Set | Items | Description |
|-----|--------|---|
| S1 | 114 | (COMPOUND OR CONCATENATED OR COMPOSITE) (N) (KEY OR KEYS) OR (PLURAL TWO OR SECOND OR 2ND OR MANY OR MORE (N) ONE OR MULTI OR MULTIPLE OR SEVERAL) (N) ATTRIBUTE? (N) (KEY OR KEYS) |
| S2 | 3344 | (UNIQUE? OR NONREPEAT? OR SPECIFIC OR INDIVIDUAL) (N) (ID OR IDENTIFIER OR LABEL) |
| S3 | 183776 | DB OR DATABASE? OR RDB OR RDBMS OR DBMS OR DATABANK? OR DATA() (BASE? OR BANK?) |
| S4 | 830577 | ATTRIBUTE? OR CHARACTERISTIC? OR METADATA OR META() DATA OR FIELD() (TYPE OR DEFINITION OR ID OR IDENTIFIER?) |
| S5 | 802618 | INDEX? OR TABLE? OR MATRIX OR MATRICES OR TUPLE? OR ROW(N) - COLUMN |
| S6 | 2 | S1 AND S2 |
| S7 | 15 | S1 AND (UNIQUE? OR NONREPEAT? OR SPECIFIC OR INDIVIDUAL) |
| S8 | 0 | S1 AND S2 AND S4 AND S5 |
| S9 | 1 | S1 AND S4 AND S5 |
| S10 | 50 | S2 AND S4 AND S3 |
| S11 | 28 | S2 AND S4 AND S5 |
| S12 | 89 | S6 OR S7 OR S9 OR S10 OR S11 |
| S13 | 71 | S12 AND IC=G06F |
| S14 | 5 | S13 AND IC=G06F-007 |
| S15 | 43 | S6 OR S7 OR S11 |
| S16 | 31 | S15 AND IC=G06F |
| S17 | 34 | S14 OR S16 |
| S18 | 34 | IDPAT (sorted in duplicate/non-duplicate order) |
| S19 | 34 | IDPAT (primary/non-duplicate records only) |

File 347: JAPIO Nov 1976-2005/Apr (Updated 050801)
(c) 2005 JPO & JAPIO

File 350: Derwent WPIX 1963-2005/UD, UM & UP=200549
(c) 2005 Thomson Derwent

19/5/6 (Item 6 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.

015626068 **Image available**
WPI Acc No: 2003-688239/200365
XRPX Acc No: N03-549828

Object classification method e.g. for digital photograph image, involves storing and searching information for unique identifier in database based on descriptors, categories and set comprising categories selected by user

Patent Assignee: ASHBY G H (ASHB-I); SCHULDT M E (SCHU-I)

Inventor: ASHBY G H; SCHULDT M E

Number of Countries: 001 Number of Patents: 001

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|----------------|------|----------|---------------|------|----------|----------|
| US 20030120673 | A1 | 20030626 | US 2001343861 | P | 20011221 | 200365 B |
| | | | US 2002327578 | A | 20021220 | |

Priority Applications (No Type Date): US 2001343861 P 20011221; US
2002327578 A 20021220

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|----------------|------|-----|----|-------------|---------------------------------------|
| US 20030120673 | A1 | | 20 | G06F-007/00 | Provisional application US 2001343861 |

Abstract (Basic): US 20030120673 A1

NOVELTY - The objects having **attributes** perceived by a user are selected corresponding to set of categories. The objects are entered into a collection by linking the objects with a collection name. The information selected to support **indexing** is stored and searched for an **unique identifier** in **database** based on the descriptors, categories and the set selected by the user.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for method for locating objects.

USE - For classifying objects e.g. digital photograph images, audio recordings, video recordings, digital text files and other files stored in electronic devices such as digital cameras, video recorders, music player and computing devices.

ADVANTAGE - Enables the user to arbitrarily define a schema of classification according to perceptions, links, and also enables reverse editing changes.

DESCRIPTION OF DRAWING(S) - The figure shows a flow diagram of the object classification method.

pp; 20 DwgNo 7/11

Title Terms: OBJECT; CLASSIFY; METHOD; DIGITAL; PHOTOGRAPH; IMAGE; STORAGE; SEARCH; INFORMATION; UNIQUE; IDENTIFY; **DATABASE** ; BASED; DESCRIBE; CATEGORY; SET; COMPRISE; CATEGORY; SELECT; USER

Derwent Class: T01

International Patent Class (Main): **G06F-007/00**

File Segment: EPI

19/5/9 (Item 9 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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015179173 **Image available**
WPI Acc No: 2003-239703/200323
XRPX Acc No: N03-190876

Recorder has generator which divides attribute information of generated file into fixed and variable data length information, correlates and assigns divided information items into different file areas

Patent Assignee: SONY CORP (SONY)
Inventor: ARIDOME K; HIRABAYASHI M; ISHIZAKA T
Number of Countries: 029 Number of Patents: 006
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---------------|------|----------|---------------|------|----------|--------|---|
| WO 200315098 | A1 | 20030220 | WO 2002JP7621 | A | 20020726 | 200323 | B |
| JP 2003059236 | A | 20030228 | JP 2001240243 | A | 20010808 | 200325 | |
| CN 1473334 | A | 20040204 | CN 2002802913 | A | 20020726 | 200427 | |
| EP 1416489 | A1 | 20040506 | EP 2002753207 | A | 20020726 | 200430 | |
| | | | WO 2002JP7621 | A | 20020726 | | |
| KR 2004021568 | A | 20040310 | KR 2003704902 | A | 20030407 | 200444 | |
| TW 591622 | A | 20040611 | TW 2002117694 | A | 20020806 | 200506 | |

Priority Applications (No Type Date): JP 2001240243 A 20010808

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|------|-----|----|-------------|------------------------------|
| WO 200315098 | A1 | J | 59 | G11B-027/00 | |
| Designated States (National): CN KR US | | | | | |
| Designated States (Regional): AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR | | | | | |
| JP 2003059236 | A | | 20 | G11B-027/00 | |
| CN 1473334 | A | | | G11B-027/00 | |
| EP 1416489 | A1 | E | | G11B-027/00 | Based on patent WO 200315098 |
| Designated States (Regional): AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR | | | | | |
| KR 2004021568 | A | | | G11B-027/10 | |
| TW 591622 | A | | | G11B-027/00 | |

Abstract (Basic): WO 200315098 A1

NOVELTY - A generator (15) generates an **index** file (IF) containing areas assigned with **unique identifier**. The generator divides file **attribute** information to fixed and variable data length, correlates and assigns divided information items into different file areas, as fixed and variable data length area groups. The recorder records IF information to a recording medium.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

- (1) file **index** information recording method; and
- (2) recorded medium storing file **index** information.

USE - For recording file **index** information.

ADVANTAGE - None given.

DESCRIPTION OF DRAWING(S) - The figure shows a block diagram of the recorder. (Drawing includes non-English language text).
file generator (15)

pp; 59 DwgNo 1/12

Title Terms: RECORD; GENERATOR; DIVIDE; **ATTRIBUTE**; INFORMATION; GENERATE; FILE; FIX; VARIABLE; DATA; LENGTH; INFORMATION; CORRELATE; ASSIGN; DIVIDE; INFORMATION; ITEM; FILE; AREA

Derwent Class: T01; W04

International Patent Class (Main): G11B-027/00; G11B-027/10

International Patent Class (Additional): **G06F-012/00**; G11B-020/10;

G11B-020/12; H04N-005/225; H04N-005/76; H04N-005/91

File Segment: EPI

19/5/11 (Item 11 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.

014584378 **Image available**
WPI Acc No: 2002-405082/200243
XRPX Acc No: N02-317995

Software development method for use in computer, involves associating meta - data including meta - data items with software components, and storing meta - data in component index on server

Patent Assignee: CURL CORP (CURL-N)

Inventor: BARBER C E; TERMAN C J

Number of Countries: 096 Number of Patents: 002

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|--------------|------|----------|----------------|------|----------|----------|
| WO 200227430 | A2 | 20020404 | WO 2001US30142 | A | 20010927 | 200243 B |
| AU 200194753 | A | 20020408 | AU 200194753 | A | 20010927 | 200252 |

Priority Applications (No Type Date): US 2000678178 A 20000928

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200227430 A2 E 56 G06F-000/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200194753 A G06F-000/00 Based on patent WO 200227430

Abstract (Basic): WO 200227430 A2

NOVELTY - The collection of **meta - data** including **meta - data** data items such as component name, **unique identifier**, are associated with software components and stored in a component **index** on a server which is accessed through a network.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) Computer system;
- (b) A set of component handling classes in an object-oriented system;
- (c) Computer language

USE - For developing software such as CURL programming language for use in computers.

ADVANTAGE - The **unique identifier** of the software component ensures the import of the correct component.

DESCRIPTION OF DRAWING(S) - The figure shows a sample software system built using components.

pp; 56 DwgNo 3/13

Title Terms: SOFTWARE; DEVELOP; METHOD; COMPUTER; ASSOCIATE; META; DATA;
META; DATA; ITEM; SOFTWARE; COMPONENT; STORAGE; META; DATA; COMPONENT;
INDEX ; SERVE

Derwent Class: T01

International Patent Class (Main): **G06F-000/00**

File Segment: EPI

19/5/14 (Item 14 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.

014136684 **Image available**
WPI Acc No: 2001-620895/200172
XRPX Acc No: N01-463265

Relational database system for object-oriented target, has succession
relationship management table and instance identification management
table having object-oriented structure

Patent Assignee: TOSHIBA KK (TOKE)
Number of Countries: 001 Number of Patents: 001
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|---------------|------|----------|--------------|------|----------|----------|
| JP 2001222460 | A | 20010817 | JP 200029310 | A | 20000207 | 200172 B |

Priority Applications (No Type Date): JP 200029310 A 20000207

Patent Details:

| Patent No | Kind | Lan Pg | Main IPC | Filing Notes |
|---------------|------|--------|-------------|--------------|
| JP 2001222460 | A | 16 | G06F-012/00 | |

Abstract (Basic): JP 2001222460 A

NOVELTY - Relational database (3) has management table (21)
having succession relationship management table defining the
attributes of top and other classes of relational database, based on
succession relationship rule and instance ID management table
managing the instance ID uniquely specifying the instance showing
the actual condition based on each class. Each table has
object-oriented structure.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for
recording medium.

USE - For object-oriented target.

ADVANTAGE - Avoids performance degradation by maintaining the
object-oriented structure of the relational database and records the
program generating an instance easily.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of
relational database system. (Drawing includes non-English language
text).

Relational database (3)

Management table (21)

pp; 16 DwgNo 1/24

Title Terms: RELATED; DATABASE; SYSTEM; OBJECT; ORIENT; TARGET; SUCCESSION;
RELATED; MANAGEMENT; TABLE ; INSTANCE; IDENTIFY; MANAGEMENT; TABLE ;
OBJECT; ORIENT; STRUCTURE

Derwent Class: T01

International Patent Class (Main): G06F-012/00

International Patent Class (Additional): G06F-017/30

File Segment: EPI

19/5/20 (Item 20 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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012298389

WPI Acc No: 1999-104495/199909

XPX Acc No: N99-075418

Method for supporting LDAP multi-value attributes with relational tables - involves storing actual entry data in ldap - entry table so that SQL queries will use attribute table to locate entry EIDs which match filter expression, then, use EIDs to retrieve entry data from ldap - entry table

Patent Assignee: INT BUSINESS MACHINES CORP (IBM)

Number of Countries: 001 Number of Patents: 001

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|-----------|------|----------|-------------|------|----------|----------|
| RD 417079 | A | 19990110 | RD 98417079 | A | 19981220 | 199909 B |

Priority Applications (No Type Date): RD 98417079 A 19981220

Patent Details:

| Patent No | Kind | Lan Pg | Main IPC | Filing Notes |
|-----------|------|--------|-------------|--------------|
| RD 417079 | A | 3 | G06F-000/00 | |

Abstract (Basic): RD 417079 A

The method involves mapping each LDAP attribute , which can be searched by a user, to an attribute relation consisting of two columns i.e EID and normalized attribute value. Each LDAP entry is assigned an unique identifier (EID). Base on the attribute syntax, the attributes are converted (or normalised) and stored in an attribute table so that SQL queries can be applied to the attribute values. The attribute table is used for mainly search operation to find the entries which match the filter criteria.

The actual entry data is stored in the LDAPENTRY table so that the SQL queries will use the attribute table to locate the entry EIDs which match the filter expression, then, use the EIDs to retrieve the entry data from the LDAPENTRY table . For reducing the overhead of going to DB2 server multiple times, a single query can be formed to perform all the required operations.

ADVANTAGE - Capability of providing multi-value support for LDAP and getting around the DB2 4K record limit.

Dwg.0/0

Title Terms: METHOD; SUPPORT; MULTI; VALUE; ATTRIBUTE ; RELATED; TABLE ; STORAGE; ACTUAL; ENTER; DATA; ENTER; TABLE ; SO; SQL; QUERY; ATTRIBUTE ; TABLE ; LOCATE; ENTER; MATCH; FILTER; EXPRESS; RETRIEVAL; ENTER; DATA; ENTER; TABLE

Derwent Class: T01

International Patent Class (Main): G06F-000/00

File Segment: EPI

19/5/21 (Item 21 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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011761986 **Image available**
WPI Acc No: 1998-178896/199816
XRPX Acc No: N98-141601

Relational database organisation method using hierarchical database outline - involves organising data in hierarchical outline with each data element in outline having key field where data related to each data element is stored in relational database with key field

Patent Assignee: LOCKHEED MARTIN CORP (LOCK)
Inventor: EXLEY F E; MASSELLE E; MCCOY G C; NICHOLSON S C
Number of Countries: 001 Number of Patents: 001
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|------------|------|----------|-------------|------|----------|----------|
| US 5724577 | A | 19980303 | US 95472763 | A | 19950607 | 199816 B |

Priority Applications (No Type Date): US 95472763 A 19950607

Patent Details:

| Patent No | Kind | Lan Pg | Main IPC | Filing Notes |
|------------|------|--------|---------------|--------------|
| US 5724577 | A | | 8 G06F-017/30 | |

Abstract (Basic): US 5724577 A

The user organisation and manipulation of data method involves prompting the user to enter a series of data elements as a heading in a hierarchical outline displayed on the display screen. A **unique identifier** is generated, which is unique to each heading in the hierarchical outline inputted by a user. The data is stored in a hierarchical database along with the **unique identifier**.

The user is prompted to enter data in a relational database respectively related to each heading in a hierarchical outline. The **unique identifier** is generated as an **indexable attribute** for the relational database, to each heading in the hierarchical outline to which the data in a relational database inputted by a user in response to the prompt presented by the second display screen is related. The data is stored in the relational database including the **unique identifier** which serves as a pointer to link the hierarchical database and the relational database. Specified **attributes** in the relational database are search for in response to a user input and a corresponding subset of the hierarchical database is created using the **unique identifier** corresponding to the **unique identifier** for the specified **attributes** in the relational database.

ADVANTAGE - Combines power of outline database manager tool with relational database functions.

Dwg.2/4

Title Terms: RELATED; DATABASE; ORGANISE; METHOD; HIERARCHY; DATABASE; OUTLINE; ORGANISE; DATA; HIERARCHY; OUTLINE; DATA; ELEMENT; OUTLINE; KEY; FIELD; DATA; RELATED; DATA; ELEMENT; STORAGE; RELATED; DATABASE; KEY; FIELD

Derwent Class: T01

International Patent Class (Main): G06F-017/30

File Segment: EPI

| Set | Items | Description |
|------|--|--|
| S1 | 498 | (COMPOUND OR CONCATENATED OR COMPOSITE) (N) (KEY OR KEYS) OR (PLURAL TWO OR SECOND OR 2ND OR MANY OR MORE(N) ONE OR MULTI OR MULTIPLE OR SEVERAL) (N) ATTRIBUTE? (N) (KEY OR KEYS) |
| S2 | 1158 | (UNIQUE? OR NONREPEAT? OR SPECIFIC OR INDIVIDUAL) (N) (ID -OR IDENTIFIER OR LABEL) |
| S3 | 1016684 | DB OR DATABASE? OR RDB OR RDBMS OR DBMS OR DATABANK? OR DATA() (BASE? OR BANK?) |
| S4 | 4060852 | ATTRIBUTE? OR CHARACTERISTIC? OR METADATA OR META() DATA OR FIELD() (TYPE OR DEFINITION OR ID OR IDENTIFIER?) |
| S5 | 3299884 | INDEX? OR TABLE? OR MATRIX OR MATRICES OR TUPLE? OR ROW(N) - COLUMN |
| S6 | 0 | S1 AND S2 |
| S7 | 60 | S1 AND (UNIQUE? OR NONREPEAT? OR SPECIFIC OR INDIVIDUAL) |
| S8 | 0 | S1 AND S2 AND S4 AND S5 |
| S9 | 24 | S1 AND S4 AND S5 |
| S10 | 24 | S2 AND S4 AND S3 |
| S11 | 8 | S2 AND S4 AND S5 |
| S12 | 111 | S6 OR S7 OR S9 OR S10 OR S11 |
| S13 | 88 | RD (unique items) |
| S14 | 69 | S13 NOT PY>2002 |
| S15 | 69 | S14 NOT PD=20020306:20040306 |
| S16 | 69 | S15 NOT PD=20040306:20050819 |
| File | 8: Ei Compendex(R) | 1970-2005/Jul W4 (c) 2005 Elsevier Eng. Info. Inc. |
| File | 35: Dissertation Abs Online | 1861-2005/Jul (c) 2005 ProQuest Info&Learning |
| File | 65: Inside Conferences | 1993-2005/Jul W5 (c) 2005 BLDSC all rts. reserv. |
| File | 2: INSPEC | 1969-2005/Jul W4 (c) 2005 Institution of Electrical Engineers |
| File | 94: JICST-Eplus | 1985-2005/Jun W2 (c) 2005 Japan Science and Tech Corp (JST) |
| File | 111: TGG Natl. Newspaper Index(SM) | 1979-2005/Aug 04 (c) 2005 The Gale Group |
| File | 6: NTIS | 1964-2005/Jul W4 (c) 2005 NTIS, Intl Cpyrght All Rights Res |
| File | 144: Pascal | 1973-2005/Jul W4 (c) 2005 INIST/CNRS |
| File | 34: SciSearch(R) | Cited Ref Sci 1990-2005/Jul W5 (c) 2005 Inst for Sci Info |
| File | 62: SPIN(R) | 1975-2005/May W4 (c) 2005 American Institute of Physics |
| File | 99: Wilson Appl. Sci & Tech Abs | 1983-2005/Jul (c) 2005 The HW Wilson Co. |
| File | 95: TEME-Technology & Management | 1989-2005/Jun W4 (c) 2005 FIZ TECHNIK |
| File | 60: ANTE: Abstracts in New Tech & Engineer | 1966-2005/Jul (c) 2005 CSA. |
| File | 57: Electronics & Communications Abstracts | 1966-2005/Jul (c) 2005 CSA. |
| File | 56: Computer and Information Systems Abstracts | 1966-2005/Jul (c) 2005 CSA. |

16/5/9 (Item 9 from file: 8)
DIALOG(R) File 8: Ei Compendex(R)
(c) 2005 Elsevier Eng. Info. Inc. All rts. reserv.

02105143 E.I. Monthly No: EIM8607-047593

Title: MULTIDIMENSIONAL DIGITAL HASHING SCHEME FOR FILES WITH COMPOSITE KEYS .

Author: Otoo, Ekow J.

Corporate Source: Carleton Univ, Ottawa, Ont, Can

Conference Title: Proceedings of ACM-SIGMOD 1985 International Conference on Management of Data.

Conference Location: Austin, TX, USA Conference Date: 19850528

Sponsor: ACM, New York, NY, USA

E.I. Conference No.: 07358

Source: Publ by ACM, New York, NY, USA p 214-229

Publication Year: 1985

Language: English

Document Type: PA; (Conference Paper)

Journal Announcement: 8607

Abstract: A dynamic hashing method is presented for structuring files with **multiple attribute keys** . The method is essentially the multidimensional analogue of linear hashing developed by Litwin and Larson. Given a record of d **attribute** keys, the scheme called multidimensional digital hashing, applies the linear hashing technique independently to each of the **attributes** to derive d integer values. These values form a d-**tuple** coordinate address of the home page of the record. A function, equivalent to the element allocation function of a d-dimensional extendible array of linear varying order and computable in time $O(d)$, is used to map the d-**tuple** page address into a linear address space. Algorithms for insertions, deletions and the processing of partial-match and range queries are presented. (Author abstract) 22 refs.

Descriptors: *DATA PROCESSING--*File Organization; INFORMATION RETRIEVAL SYSTEMS; COMPUTER PROGRAMMING--Algorithms

Identifiers: DYNAMIC HASHING METHODS; HASHING TECHNIQUES; HASHING FUNCTIONS

Classification Codes:

723 (Computer Software); 723 (Computer Software)

72 (COMPUTERS & DATA PROCESSING); 90 (GENERAL ENGINEERING)

16/5/17 (Item 1 from file: 2)

DIALOG(R) File 2: INSPEC

(c) 2005 Institution of Electrical Engineers. All rts. reserv.

7314859 INSPEC Abstract Number: C2002-08-6160-008

Title: Design and implementation of the index manager for the main memory DBMS Tachyon

Author(s): Sang-Wook Kim; Sanghyun Park; Wan Choi; Man-Soon Kim

Author Affiliation: Dept. of Comput., Inf., & Commun. Eng., Kangwon Nat. Univ., Chunchon, South Korea

Conference Title: Proceedings of the IASTED International Conference Applied Informatics International Symposium on Software Engineering, Databases, and Applications p.473-8

Editor(s): Hamza, M.H.

Publisher: ACTA Press, Anaheim, CA, USA

Publication Date: 2001 Country of Publication: USA iv+526 pp.

ISBN: 0 88986 322 9 Material Identity Number: XX-2002-00971

Conference Title: Proceedings of the IASTED International Conference Applied Informatics. International Symposium on Software Engineering, Databases, and Applications

Conference Sponsor: IASTED

Conference Date: 18-21 Feb. 2002 Conference Location: Innsbruck, Austria

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: The main memory DBMS (MMDBMS) efficiently supports various database applications that require high performance since it employs main memory rather than disk as primary storage. We discuss the experiences obtained in developing the **index** manager of the Tachyon, a next generation MMDBMS. An **index** manager is an essential sub-component of a DBMS used to speed up the retrieval of objects from a large volume of databases in response to a certain search condition. Previous research efforts on **indexing** proposed various **index** structures. However, they hardly dealt with the practical issues occurring in implementing an **index** manager on a target DBMS. We touch on these issues and present our experiences in developing the **index** manager of the Tachyon as solutions. The main issues touched are: (1) compact representation of an **index** entry, (2) support of variable-length keys, (3) support of **multiple - attribute keys**, (4) support of duplicated keys, (5) concurrency control, and (6) backup and recovery. (14 Refs)

Subfile: C

Descriptors: concurrency control; database **indexing**; database management systems; information retrieval; storage management

Identifiers: **index** manager implementation; **index** manager design; main memory DBMS Tachyon; MMDBMS; database applications; primary storage; object retrieval; **index** structures; compact representation; **index** entry; variable-length keys; **multiple - attribute keys**; duplicated keys; concurrency control; backup; system recovery

Class Codes: C6160 (Database management systems (DBMS)); C6120 (File organisation); C6150N (Distributed systems software); C7250R (Information retrieval techniques)

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| Set | Items | Description |
|-----|--------|--|
| S1 | 356 | (COMPOUND OR CONCATENATED OR COMPOSITE) (N) (KEY OR KEYS) OR (PLURAL TWO OR SECOND OR 2ND OR MANY OR MORE(N) ONE OR MULTI OR MULTIPLE OR SEVERAL) (N) ATTRIBUTE? (N) (KEY OR KEYS) |
| S2 | 16569 | (UNIQUE? OR NONREPEAT? OR SPECIFIC OR INDIVIDUAL) (N) (ID OR IDENTIFIER OR LABEL) |
| S3 | 210133 | DB OR DATABASE? OR RDB OR RDBMS OR DBMS OR DATABANK? OR DA- TA() (BASE? OR BANK?) |
| S4 | 652779 | ATTRIBUTE? OR CHARACTERISTIC? OR METADATA OR META() DATA OR FIELD() (TYPE OR DEFINITION OR ID OR IDENTIFIER?) |
| S5 | 785699 | INDEX? OR TABLE? OR MATRIX OR MATRICES OR TUPLE? OR ROW(N) - COLUMN |
| S6 | 2 | S1(10N)S2 |
| S7 | 44 | S1(10N) (UNIQUE? OR NONREPEAT? OR "NOT"() REPEAT? OR SPECIFIC OR INDIVIDUAL) |
| S8 | 0 | S1(10N)S2(10N)S4(10N)S5 |
| S9 | 12 | S1(10N)S4(10N)S5 |
| S10 | 103 | S2(10N)S4(10N)S3 |
| S11 | 184 | S2(10N)S4(10N)S5 |
| S12 | 10 | (S7 OR S10 OR S11) AND IC=G06F-007 |
| S13 | 31 | S7 AND IC=G06F |
| S14 | 45 | S6 OR S9 OR S13 OR S12 |
| S15 | 23 | S14 NOT AD>20020306 |
| S16 | 32 | S12 OR S15 |
| S17 | 23 | S16 NOT AD>20020306 |

File 348:EUROPEAN PATENTS 1978-2005/Jul W04

(c) 2005 European Patent Office

File 349:PCT FULLTEXT 1979-2005/UB=20050804,UT=20050728

(c) 2005 WIPO/Univentio

17/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01574901

A calculation engine for use in OLAP environments
Eine Berechnungsmaschine zum Gebrauch in OLAP-Umgebungen
Un moteur de calcul a utiliser dans des environnements OLAP

PATENT ASSIGNEE:

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APPLICATION (CC, No, Date): EP 2001309330 011102;

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EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G06F-017/30 ; G06F-017/60

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INTERNATIONAL PATENT CLASS: G06F-017/30 ...

... G06F-017/60

...SPECIFICATION combination of entities, one from each dimension. Within a data warehouse, each dimension is a **table** where each record contains a key (or a **composite key**) to **uniquely** identify each entity and a list of **attributes** to qualify or describe the corresponding entity (or key). Each fact record in the fact...

17/3,K/5 (Item 1 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
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00913817 **Image available**

**A METHOD AND APPARATUS FOR TRANSFORMING DATA
PROCEDE ET APPAREIL DE TRANSFORMATION DE DONNEES**

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200247463 A2-A3 20020620 (WO 0247463)

Application: WO 2001US48573 20011212 (PCT/WO US0148573)

Priority Application: US 2000255560 20001212; US 2001960902 20010920; US
2001960541 20010920

Designated States:

(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL
TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

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Fulltext Word Count: 16311

Main International Patent Class: **G06F-013/14**

International Patent Class: **G06F-015/16** ...

... **G06F-015/17**

Fulltext Availability:

Detailed Description

Detailed Description

... or updated with the transformed source record.

At step 160, embodiments of the invention match **unique** fields or field combinations (called "**compound keys**") to identify one or more destination records that correspond to each field of a source...class and match type between source data fields and destination data fields. Record matching against **unique** fields or fields combinations ("**compound keys**") is used to identify the one or more destination records that correspond to each source...table is a simple, rectangular, row/column arrangement of related data values.

Unique Field: a **unique** field (or field combination) is the key field (or **compound key** field combination) for a record and **uniquely** identifies the record. A table may have more than one unique field (or field combination

...

17/3,K/13 (Item 9 from file: 349)
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00774499 **Image available**

METHOD FOR ORGANIZING DIRECTORIES

PROCEDE D'ORGANISATION DE REPERTOIRES

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200108045 A1 20010201 (WO 0108045)

Application: WO 99IL405 19990722 (PCT/WO IL9900405)

Designated States:

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AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE
GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK
MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN
YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW SD SL SZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

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Fulltext Word Count: 33994

Fulltext Availability:

Detailed Description

Detailed Description

... well as other information such as the record size. The
search scheme of the **index** is oblivious to the **meta - data** . It
locates the
record from the designator (or **composite**) **key** without using the **meta**
- data .

The **meta - data** is required to construct the (composite) designator key
and, once the record is retrieved, to...

17/3,K/15 (Item 11 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00758776 **Image available**

METHOD AND APPARATUS FOR POPULATING MULTIPLE DATA MARTS IN A SINGLE AGGREGATION PROCESS

PROCEDE ET APPAREIL D'EQUIPEMENT DE PLUSIEURS MINIENTREPOTS DANS UN PROCESSUS UNIQUE D'AGREGATION

Patent Applicant/Assignee:

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Patent and Priority Information (Country, Number, Date):

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Application: WO 2000US14497 20000524 (PCT/WO US0014497)

Priority Application: US 99317773 19990524

Designated States:

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AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE
GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK
MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU
ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

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Fulltext Word Count: 11887

Main International Patent Class: G06F-015/00

International Patent Class: G06F-017/30

Fulltext Availability:

Detailed Description

Detailed Description

... the star schema is the outcome of the dimension modeling process.

Each dimension is a **table** where each record contains a key (or a **composite key**) that **uniquely** identifies each entity and a list of **attributes** to qualify or describe the corresponding entity (or key).
Each fact record in the fact...

17/3,K/18 (Item 14 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00566946 **Image available**

SYSTEM FOR KEYING PROTECTED ELECTRONIC DATA TO PARTICULAR MEDIA TO PREVENT
UNAUTHORIZED COPYING USING ASYMMETRIC ENCRYPTION AND A UNIQUE
IDENTIFIER OF THE MEDIA
SYSTEME DE CODAGE DE DONNEES ELECTRONIQUES PROTEGEES SUR UN SUPPORT
PARTICULIER AFIN D'EMPECHER LA COPIE NON AUTORISEE PAR UN CRYPTAGE
ASYMETRIQUE ET UN IDENTIFICATEUR UNIQUE DU SUPPORT

Patent Applicant/Assignee:

IOMEGA CORPORATION,

Inventor(s):

KUPKA Michael,

HAWKINS Michael L,

THOMAS Trent M,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200030319 A1 20000525 (WO 0030319)

Application: WO 99US25761 19991105 (PCT/WO US9925761)

Priority Application: US 98191666 19981113

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CA CN JP SG AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 8547

International Patent Class: G06F-001/00

Fulltext Availability:

Detailed Description

Claims

English Abstract

...pieces of media. The downloaded data may also be associated to the
media by a **compound key** that includes the **unique identifier** of
the media, a vendor identifier and a user identifier. The method and
system establishes...

...media. The electronic data is encrypted and written to the media using
either the aforementioned **unique identifier** or **compound key**.

Detailed Description

... associates the protected electronic data to a particular piece of
storage media based on a **composite key** using at least a **unique
identifier** of the media.

BACKGROUND OF THE INVENTION

Protection of copyrighted and other protected digitally stored...the
manufacturing process.

Alternatively, the downloaded data may be associated to the media by a
compound key that includes the **unique identifier** of the media, a
vendor identifier and a user identifier to associate the electronic data
...

...media. The electronic data is encrypted and written to the media using
either the aforementioned **unique identifier** or **compound key**.

I 0 Other features of the invention are described below.

BRIEF DESCRIPTION OF THE DRAWINGS...